Vessel Dissection and Ligation
Key Simulated steps and operative Principles

- Dissection and ligation of vessels in the groin
- Use of Weitlander self retaining retractor for exposure in deep space
Goals and Objectives

1. Handle Weitlander correctly to achieve proper exposure
2. Dissect a blood vessel carefully in a deep space without jeopardizing its integrity
3. Isolate a blood vessel for ligation in a deep space
4. Demonstrate basic skills including tying in a deep space, suture ligation, vertical mattress suture, and simple running suture
Required Materials

1. Pig Legs
2. ¼ inch Penrose
3. Right angle x2
4. 3-0 (Polyglactin acid) tie
5. 3-0 Vicryl suture on SH needle
6. Color dye
7. DeBakey forceps
8. Scalpel
9. Metzbaum
10. Weitlander
11. 3-0 nylon
Setup Step 1

Obtain Pig Legs
Setup Step 2

Use Adison Clamps to create a tunnel inside the pig leg.
Setup Step 3

Tunnel ¼ inch Penrose from the cut end of the pig leg between the bones through the knuckle end
Setup Step 4

Tie off the Penrose at the knuckle end and secure this end to the deep tissue with a suture
Setup Step 5

Use a syringe with vascular cannula tip to inject food coloring water into the Penrose at the cut end.
Tie off the Penrose at the cut end once the Penrose is distended
Suture and secure Penrose on the cut end
Make a 6 cm incision over the course of the Penrose/vessel
Procedure Step 2

Use Metzbaum scissor to dissect down to the Penrose/ vessel
Procedure Step 3

Weitlander self retaining retractor should be adjusted multiple times to allow adequate exposure
The Penrose/vessel should be exposed adequately, approximately 4 cm to allow future ligation
Procedure Step 5

Using a right angle, the vessel is dissected out
Procedure Step 7

One end is ligated while the other is suture ligated
The fascia is closed with simple running suture.
Procedure Step 9

The skin is closed using vertical mattress approximately 1-2 cm apart.
Checklist

- Provide tension to make straight sharp incision without skiving
- Utilize the assistant/Weitlander for proper tension and dissect down to the vessel
- Dissect the vessel free without cutting into it
- Securely ligate and suture ligate the vessel with no or minimal spillage of food coloring water
- Secure closure of the fascia with proper spacing
- Secure closure and approximation of skin edges